Plena DVD Player-Tuner

Security Systems

en | Installation and User Instructions
PLN-DVDT

BOSCH

Important safeguards

Before installing or operating this product, always read the Important Safety Instructions, which are available as a separate document (9922 141 7014x). These instructions are supplied together with all equipment that can be connected to the mains.

Thank you for choosing a Bosch Security Systems product.

Table of contents

Important safeguards **2**
Table of contents **3**
1. Introduction **5**
1.1 Purpose 5
1.2 Digital document 5
1.3 Intended audience 5
1.4 Alerts 5
1.5 Signs 5
1.5.1 Note signs 5
1.5.2 Caution Warnings and Dangers signs 5
1.6 Conversion tables 6
2. System overview **7**
2.1 Plena 7
3. Equipment **9**
3.1 Introduction 9
3.2 Contents of box 9
3.3 Controls, connectors and indicators 11
3.3.1 Front panel 11
3.3.2 Rear panel 12
3.4 Installation 13
3.4.1 Unpack unit 13
3.4.2 Install unit 13
3.4.3 Connect unit to mains 13
3.4.4 External settings and connections 14
3.4.5 Tuner region selection 14
3.4.6 Connect to an amplifier 15
3.4.7 Power 16
4. Switch on and off **17**
4.1 Switch on 17
4.2 Switch off 17
5. Operation **19**
5.1 Operation of tuner 19
5.1.1 Station selection 19
5.1.2 Programming 19
5.2 Operation of DVD-player 20
5.2.1 Play-back and track selection 20
5.3 Creation of MP3 CD-Rs 20
6. Remote control **21**
6.1 Overview of controls 21
6.2 Setup 23
6.2.1 System setup page 24
6.2.2 Language setup page 25
6.2.3 Audio setup page 26
6.2.4 Video setup page 27

7. Technical data 29
7.1 Electrical 29
7.2 Performance 29
7.3 Tuner 29
7.4 DVD player 29
7.5 Outputs 29
7.6 Environmental conditions 29
7.7 General 29

1 Introduction

1.1 Purpose

These Installation and User Instructions provide information on installing, configuring, and operating the Plena DVD Player-Tuner.

1.2 Digital document

The Installation and User Instructions are also available as a digital document in the Adobe Portable Document Format (PDF). All references to pages, figures, tables, etc. in this digital document contain hyperlinks to the referenced locations.

1.3 Intended audience

These Installation and User Instructions are intended for installers and users of a Plena system.

1.4 Alerts

Four types of alerts are used in this manual. The alert type is closely related to the effect that may be caused if it is not observed. These alerts - from least severe effect to most severe effect - are:

- **Note**
  Alert containing additional information. Usually, not observing a note alert does not result in damage to the equipment or personal injuries.
- **Caution**
  The equipment can be damaged if the alert is not observed.
- **Warning**
  Persons can be (severely) injured, or the equipment can be seriously damaged, if the alert is not observed.
- **Danger**
  Not observing the alert can result in death.

1.5 Signs

1.5.1 Note signs

The signs used in combination with Notes provide extra information about the Note. See the following examples:

Note
General sign for notes.

Note
Consult the indicated source of information.

1.5.2 Caution Warnings and Dangers signs

The signs used in combination with Caution, Warnings, and Dangers indicate the type of hazard present. See the following examples:

Caution, Warning, Danger
General sign for cautions, warnings and dangers.

Caution, Warning, Danger
Risk of electric shock.

Caution, Warning, Danger
Risk of electrostatic discharge.

1.6 Conversion tables

In this manual, SI units are used to express lengths, masses, temperatures etc. These can be converted to non-metric units using the following information.

table 1.1: Conversion of units of length

1 in =	25.4 mm	1 mm =	0.03937 in
1 in =	2.54 cm	1 cm =	0.3937 in
1 ft =	0.3048 m	1 m =	3.281 ft
1 mi =	1.609 km	1 km =	0.622 mi

table 1.2: Conversion of units of mass

1 lb =	0.4536 kg	1 kg =	2,2046 lb

table 1.3: Conversion of units of pressure

1 psi =	68.95 hPa	1 hPa =	0.0145 psi

Note
1 hPa = 1 mbar.

$$F = \frac{9}{5} \quad C + 32$$

$$C = \frac{5}{9} \quad (F - 32)$$

2 System overview

2.1 Plena

The Plena DVD Player-Tuner is part of the Plena product range. Plena provides public address solutions for places where people gather to work, worship, trade, or to relax. It is a family of system elements that are combined to create public address systems tailored for virtually any application.

The range includes:

- mixers
- preamplifiers
- power amplifiers
- a music source unit
- a digital message manager
- a feedback suppressor
- call stations
- an 'All-in-One' system
- a voice alarm system
- a timer
- a charger
- a loop amplifier

The various elements are designed to complement each other thanks to matched acoustical, electrical and mechanical specifications.

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3 Equipment

3.1 Introduction

The Plena DVD Player-Tuner is the ideal solution for providing background music (BGM) for a Plena system. It comprises of:

- a DVD-player that can play DVDs, audio-CDs, as well as long play MP3-encoded discs), and
- a digitally controlled AM/FM-tuner for receiving radio stations.

Simultaneous operation of the DVD-player and the tuner is possible to allow for two-channel music distribution. The unit has separate outputs for the DVD-player and the tuner, as well as a combined output for connection to a system without music selector. This output provides the tuner signal as long as the DVD-player is not playing. All outputs are mono.

See figure 3.1 (on the next page) for a schematic overview of the Plena DVD Player-Tuner.

3.2 Contents of box

The packaging box contains the following contents:

- PLN-DVDT (x1)
- Power cord (x1)
- Remote control (x1)
- AM loop antenna (x1)
- Antenna plug (x1)
- Plena CD with Installation and User Instructions (x1)

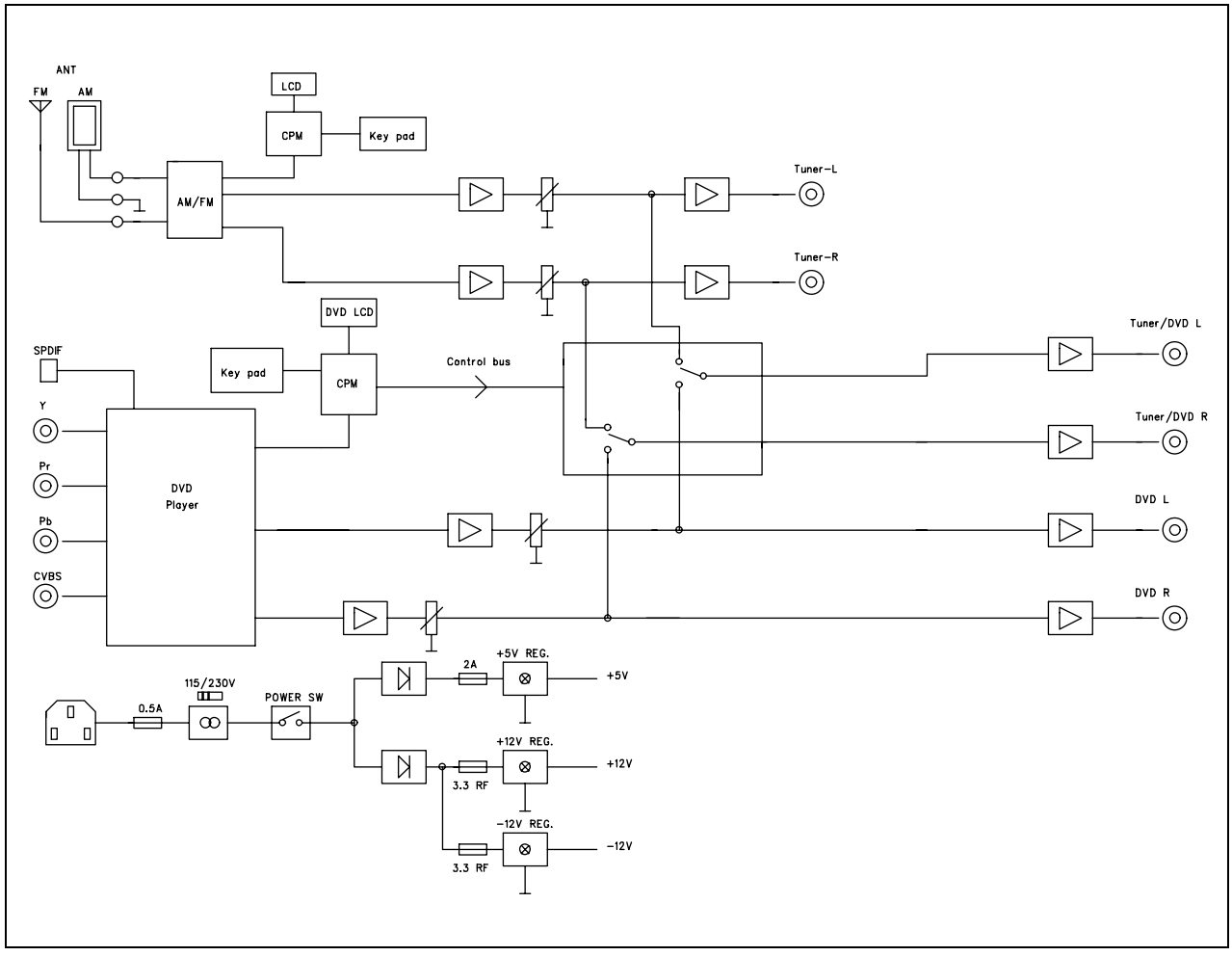

figure 3.1: Schematic overview of the Plena DVD Player-Tuner

3.3 Controls, connectors and indicators

3.3.1 Front panel

See figure 3.2 for an overview of the controls and indicators.

1 Power button
2 DVD pause key
3 DVD eject key
4 Mode key
5 DVD previous key (press once to select previous chapter or track; press and hold to fast reverse)
6 DVD play key
7 DVD display
8 DVD next key (press once to select next chapter or track; press and hold to fast forward)
9 DVD stop key
10 Tuner preset memory keys 1-5 and 6-10
11 Tuner display
12 Tuner frequency up/down keys (press once to fine tune; press and hold to search for channels)
13 Tuner FM/AM selection key
14 Tuner scan key
15 Tuner memory key
16 Tuner shift key to select memory 1-5 or 6-10

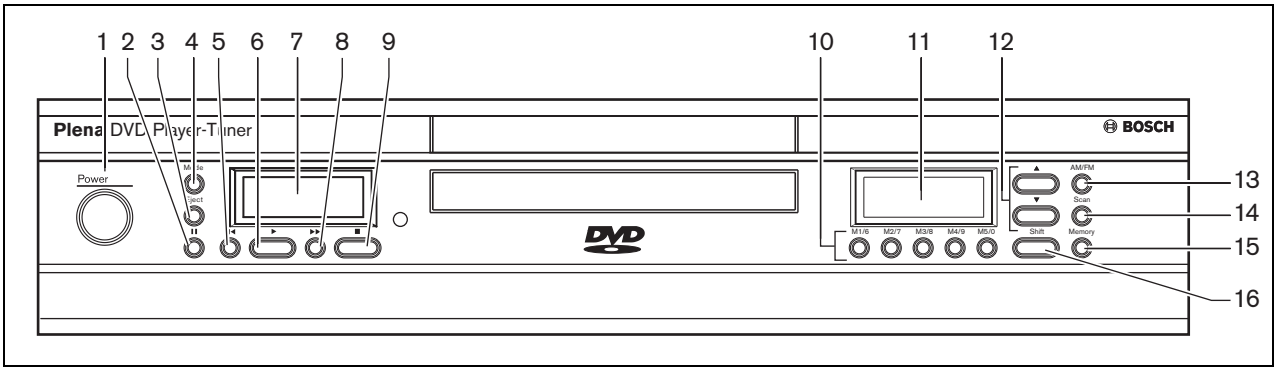

figure 3.2: Front panel of Plena DVD Player-Tuner

3.3.2 Rear panel

See figure 3.3 for an overview of the connectors and switches:

1 FM antenna input
2 AM antenna input
3 Mono/stereo switch
4 Level control (tuner outputs)
5 Tuner outputs
6 Combined tuner/DVD outputs
7 DVD outputs
8 Level control (DVD outputs)
9 SPDIF connection (optical digital output)
10 Video output (composite)
11 Video output (component)
12 Video output (S-video)
13 Earth connection screw
14 Mains fuse
15 Mains connection (3-pole)
16 Mains voltage selector (115V/ 230V)

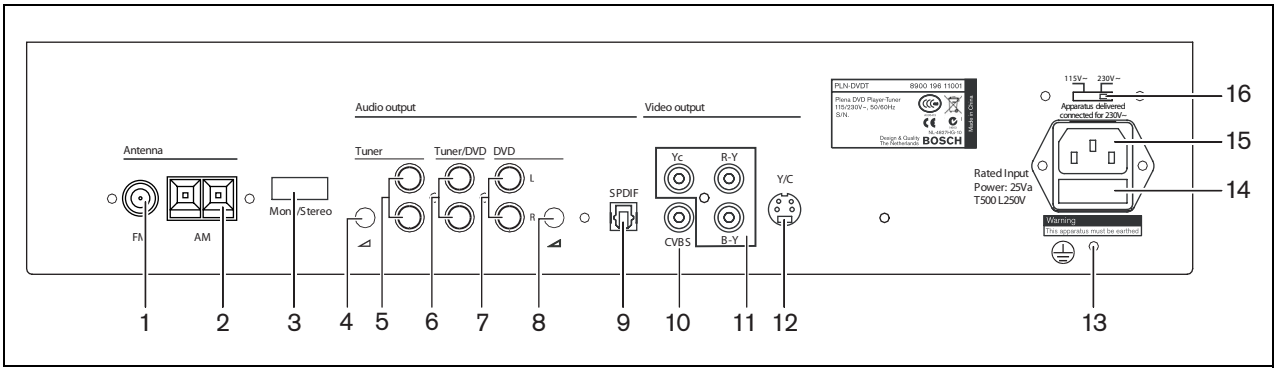

figure 3.3: Rear panel of Plena DVD Player-Tuner

3.4 Installation

3.4.1 Unpack unit

Carefully peel off the protective plastic film on both displays. Do not use sharp or pointed objects in order to avoid scratches. Use your fingernails instead.

3.4.2 Install unit

The Plena DVD Player-Tuner is delivered for tabletop use, but you can mount it in a 19" rack. If you mount the unit in a rack, you must:

- use the mounting brackets delivered with the unit.
- remove the 4 feet from the bottom of the unit. (Without the feet the unit is 2U high.)

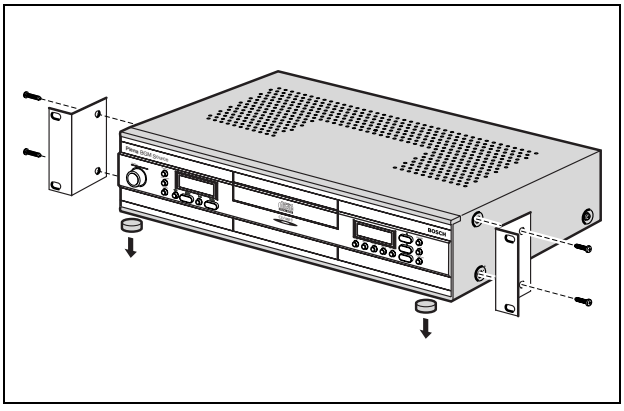

figure 3.4: Installing the Plena DVD Player-Tuner

3.4.3 Connect unit to mains

Caution
Potential equipment damage. Before connecting power, always check the voltage selector on the rear panel of the Plena DVD Player-Tuner.

Make sure the voltage selector (115V/ 230V) is correctly set for the country's main voltage (see figure 3.5). Make sure the power switch (1) on the front of the Plena DVD Player-Tuner is set to Off - not pushed in. Connect the power cord to the mains connector and plug it into the mains outlet.

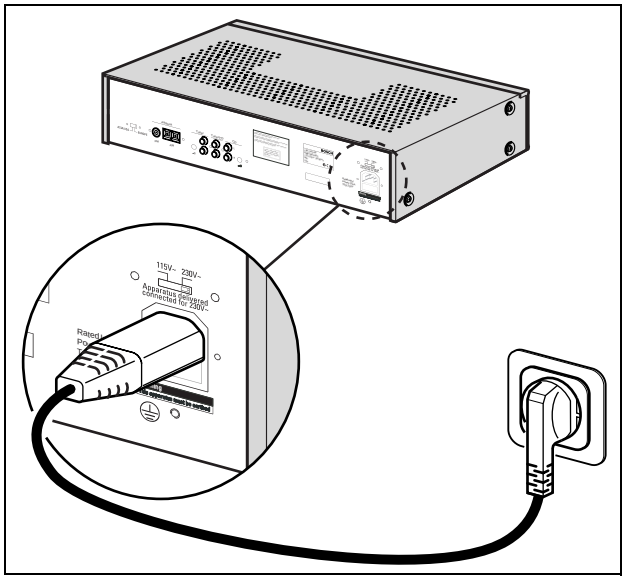

figure 3.5: Voltage selector

3.4.4 External settings and connections

Connect antennas

The FM input must be connected to an antenna or cable network with a COAX cable of 75 Ohm. A connector for the FM input is provided with the unit. The AM input can be connected to the loop-antenna delivered with the unit.

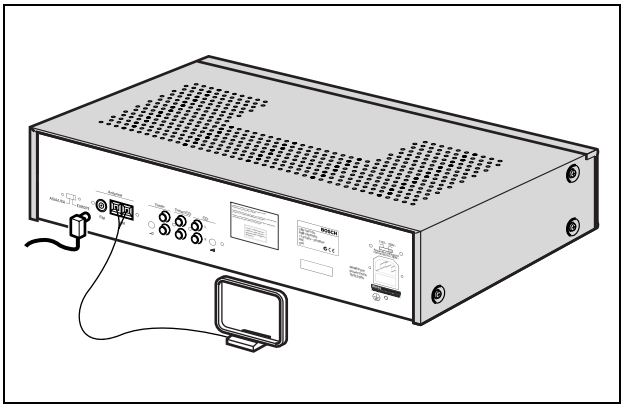

figure 3.6: Connecting antennas

3.4.5 Tuner region selection

Caution
Potential equipment damage. Before switching on the system, make sure you have read section 3.4.7 “Power”, and section 4 “Switch on and off”.

To set the tuner region to either ASIA/USA or Europe:

1 Press and hold in:
   - the tuner frequency up/down keys (12).
   - the tuner memory key (15).
2 Press the power button (1) to switch the system on.
3 Either USA or EUP will be displayed.
4 To toggle between USA or EUP, switch the system off, and repeat from step 1.

3.4.6 Connect to an amplifier

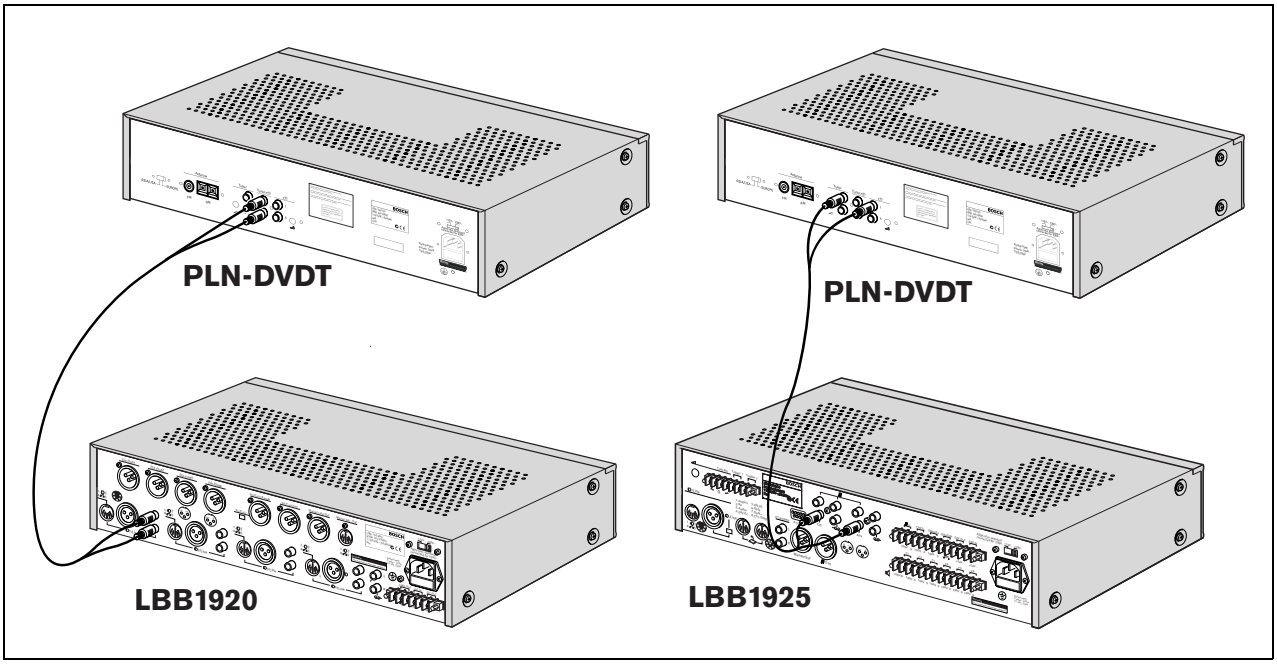

figure 3.7: Connecting to an amplifier

The outputs of the Plena DVD Player-Tuner can be connected to a Plena Pre-amplifier or Mixer Amplifier. A stereo cinch/cinch-cable is packed with the unit. As the Plena DVD Player-Tuner and the Plena amplifiers are mono, this single cable can be used to connect both the DVD-player and the tuner together to the amplifier, using only one connection of the stereo pair.

The combined DVD-player/tuner output can be used for amplifiers without music source selector, e.g. the Plena Universal Pre-amplifier LBB1920.

3.4.7 Power

1 Make sure the power switch (1) on the front of the Plena DVD Player-Tuner is set to off - not pushed in (see figure 3.2).

Caution
Potential equipment damage. Before connecting the mains lead, always check the voltage selector on the rear panel of the Plena DVD Player-Tuner.

2 Make sure the voltage selector (115V/ 230V) is correctly set for the country's main voltage (see figure 3.5).
3 Make sure the mains lead is connected to the Plena DVD Player-Tuner and the power supply (see figure 3.5).

4 Switch on and off

4.1 Switch on

Caution
Potential equipment damage. Before applying power, always check the voltage selector on the rear panel of the Plena DVD Player-Tuner.

1 Make sure the voltage selector (115V/ 230V) is correctly set for the country's main voltage (see figure 3.5).
2 Set the power switch (1) on the front of the Plena DVD Player-Tuner to On - pushed in (see figure 3.2).

4.2 Switch off

Set the power switch (1) on the front of the Plena DVD Player-Tuner to Off - not pushed in (see figure 3.2).

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5 Operation

5.1 Operation of tuner

5.1.1 Station selection

- Use the tuner FM/AM selection key (13) to choose between FM and AM reception.
- Use the tuner frequency up/down keys (12) to select the required frequency (press once to fine tune; press and hold to search for channels).

5.1.2 Programming

- Save the selected radio station as a preset by pressing the tuner memory key (15).
- Press the tuner preset memory keys M1/6 to M5/0 (10) for memory positions 1 to 5.

Or

- Press the tuner memory key (15), the tuner shift key (16) and the tuner preset memory keys M1/6 to M5/0 (10) for memory positions 6 to 10.
- The tuner display (11) shows 'MEMORY' during this process. Both for AM and FM, 10 presets are available.

Saved presets are selected by pressing the tuner memory keys M1/6 to M5/0 (10) or by pressing the tuner shift key (16) followed by M1/6 to M5/0. For easy selection, pressing the tuner scan key (14) monitors the presets by selecting all 10 presets sequentially for 5 seconds.

Note
The FM tuner mutes the noise between radio stations. This means that the output is muted when the tuner is not tuned to a radio station.
To turn this feature off, press and hold the tuner frequency up/down keys (12) and the tuner shift key during power up.
To turn this feature on again, repeat this procedure.

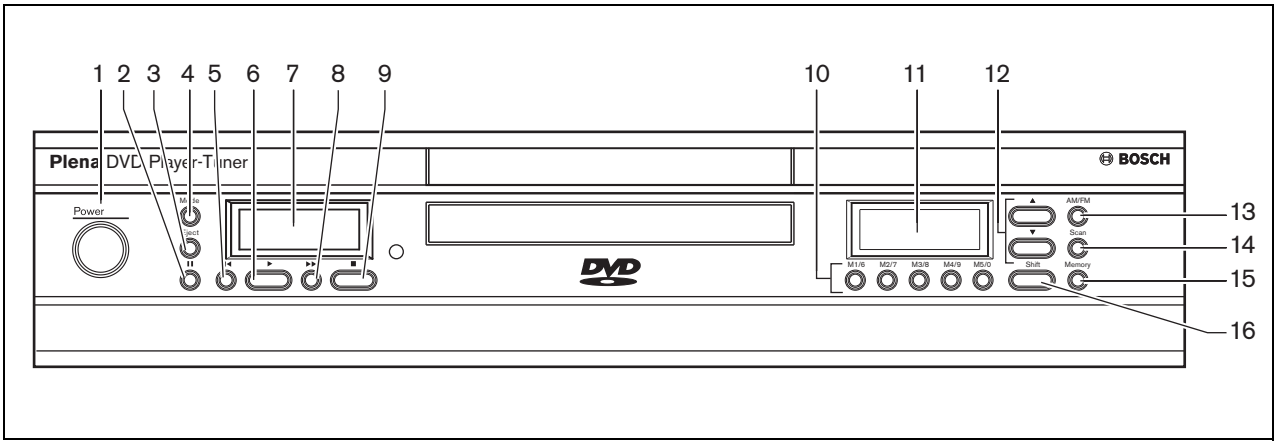

figure 5.1: Front panel of Plena DVD Player-Tuner

5.2 Operation of DVD-player

5.2.1 Play-back and track selection

After inserting a disc (CD or DVD), the DVD-player will detect the type of disc and either display information on the DVD display or TV screen.

- If an audio CD is loaded, the number of tracks on the CD will be shown on the DVD display.
- If a disc is loaded containing MP3s or JPEGs, a directory structure will be shown on the TV screen.
- If a DVD is loaded, the DVD menu will be shown on the TV screen.

The loading of some discs may take longer, depending on the number of files and subdirectories on the disc.

The Plena DVD Player-Tuner will read the data on the CD depending on the type of CD loaded:
Mixed mode CD (normal CD with additional CD-ROM content). Only the CD-ROM content is read. The normal CD portion is not read.
CD extra CD (normal CD with additional CD-ROM content). Only the audio content is read. The data portion is not read.

For track selection proceed as follows:

- Shortly press the DVD previous key (5) and/or the DVD next key (8) to select the chapter or track. Prolonged pressing results in fast reverse or fast forward.
- Use the DVD play key (6) to start playing.
- Use the DVD pause key (2) to pause playing.
- Use the DVD stop key (9) to stop playing.
- Use the DVD eject key (3) to eject the disc.

Note
If fast forward is pressed on the unit, it will only fast forward while the key is held in; the unit will start to play as soon as the key is released. If fast forward is pressed on the remote control, the unit will continue to fast forward until the play key is pressed.

By repeatedly pressing the mode key (4) you can select the following modes:

- Repeat all tracks. The display shows ⊂⊃ and the monitor shows [rep. ALL].
- Switch off the repeat function. The monitor shows [rep. OFF].
- Repeat the current track. The display shows '1' and the monitor shows [rep. 1].
- Repeat the current folder. The display shows ⊂ and the monitor shows [rep. DIR].

Note
If a DVD was loaded, repeating the current folder results in a repetition of the current segment.

5.3 Creation of MP3 CD-Rs

Use the Musicmatch software (provided with the Plena bonus CD) to create your own MP3 CD-Rs (CD-ROMs). For more information on Musicmatch see: www.musicmatch.com

Constant MP3-bit rates (CBR) of 32 - 320 kbps are supported, as well as variable bit rate (VBR) files. In general 128 kbps is used for MP3s. If 160 kbps or 65% VBR is used, better quality can be achieved.

6 Remote control

6.1 Overview of controls

1 Setup key (see “Setup” on page 23)
2 DVD eject key
3 DVD chapter and CD track selection keys 1-9
4 DVD chapter and CD track selection key 0
5 DVD chapter and CD track selection key 10+
6 DVD next key, selects next chapter or page (6 tracks)
7 Multi-functional DVD keys (left/right):
- DVD and CD next keys
- Setup navigation keys (see page 23)

8 Enter key (for confirming settings)
9 Fast forward key
10 Multi-functional DVD keys (up/down):
- DVD and CD next keys
- Setup navigation keys (see page 23)

11 DVD pause key
12 DVD play key
13 Volume plus key
14 Volume minus key
15 Tuner preset memory keys 4/9
16 Tuner preset memory keys 3/8
17 Tuner AM/FM selection key
18 Tuner memory key
19 Tuner scan key
20 Tuner frequency down key (press once to fine tune; press and hold to search for channels)
21 Tuner frequency up key (press once to fine tune; press and hold to search for channels)
22 Tuner shift key
23 Tuner preset memory keys 5/0
24 Tuner preset memory keys 2/7
25 Tuner preset memory keys 1/6
26 OSD key
27 DVD Zoom key (enlarges the picture on the TV screen. Use the multi-functional keys (7 and 10) to move the zoom area on the screen)
28 DVD stop key
29 Fast reverse key
30 DVD previous key, select previous chapter or page (6 tracks)
31 Volume mute key
32 Subtitle key (shows or hides subtitles)
33 DVD menu key (displays the content menu of the DVD)
34 DVD mode key
35 DVD title key (displays the title menu of the DVD)

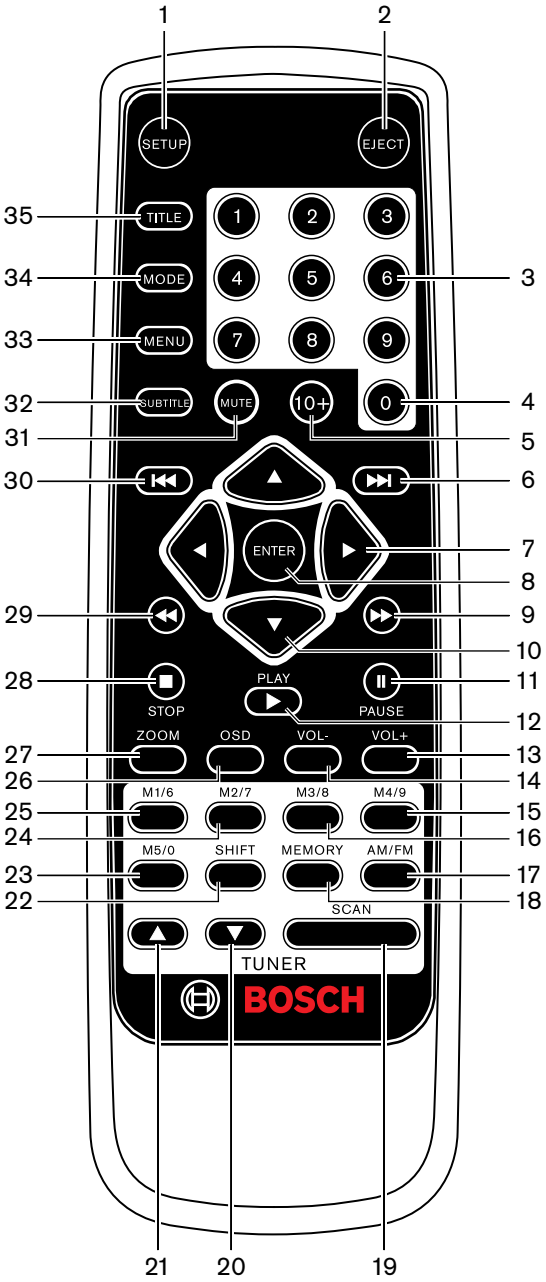

figure 6.1: Overview of remote control

6.2 Setup

This section gives information on the setup options. Press the setup key on the remote control to enter the setup menu. The “System Setup” page will be displayed. See figure 6.2.

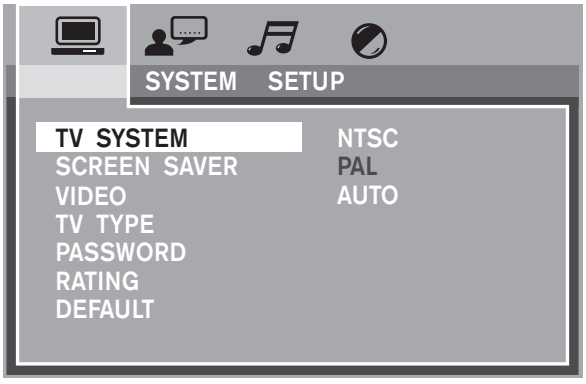

figure 6.2: System setup page

Use the left and right navigation keys (7) to select the various setup pages. The following pages are available:

- System Setup Page (see page 24)
- Language Setup Page (see page 25)
- Audio Setup Page (see page 26)
- Video Setup Page (see page 27)

Once you have selected a page, use the up and down navigation keys (10) to scroll through the menu settings. Stop at the setting you want to change, and then use the right navigation key to jump to the settings options column. Once inside this column, use the up and down navigation keys to select the option of your choice, and then press the Enter key (8) to confirm the setting.

Tip: Use the left navigation key to scroll back through the menus and return to the icons at the top of the page.

Note
When an option is selected, it is displayed in the “Current settings” column (second column in the table), and also highlighted in the “Setting options” column (third column in the table).

Click the menu button to exit the setup menu. See the following tables for an overview of all setup pages.

The recommended setting for a wide screen monitor is 16:9. The recommended setting for a 4:3 monitor is 4:3 full. This will ensure that all information including subtitles is visible. See section 6.2.1, System setup page.

Note
The monitor type will also determine the effect that these settings will have.

6.2.1 System setup page

Note
The layout of some screens may differ depending on the country.

Setting	Current setting (example only)	Setting options	Comments
TV SYSTEM	PAL	NTSC	
		PAL	
		AUTO	
SCREEN SAVER	OFF	ON	
		OFF	
VIDEO	YUV INTERLACE	YUV INTERLACE	Note: If no picture is displayed after selecting this option, press the P-SCAN key on the remote control to switch the TV mode to the correct setting for your TV.
		P - SCAN	Note: If no picture is displayed after selecting this option, press the P-SCAN key on the remote control to switch the TV mode to the correct setting for your TV.
		S-VIDEO	S-video format. Use a dedicated S-video cable.
TV TYPE	4:3PS	4:3PS	Pan Scan. This zooms in for a part of the screen and stretches the screen slightly.
		4:3LB	Letter Box. The entire picture is shown, with bars above and below the screen.
		16:9	
PASSWORD			Sets the password for “RATING” settings. The default password is “0000”.
RATING	1 KID SAF	1 KID SAF	
		2 G	
		3 PG	
		4 PG 13	
		5 PGR	
		6 R	
		7 NC 17	
		8 ADULT	
DEFAULT		RESET	Loads the factory default settings.

6.2.2 Language setup page

Setting	Current setting (example only)	Setting options	Comments
OSD LANGUAGE	ENGLISH	ENGLISH	
		SPANISH	
		GERMAN	
		FRENCH	
		ITALIAN	
		PORTUGUESE	
		DUTCH	
		CHINESE	
AUDIO LANG	ENGLISH	ENGLISH	Determines the default language for DVD menus. E.g.: If “FRENCH” is selected, the French audio will automatically be chosen each time a DVD with French audio is inserted.
		SPANISH	
		GERMAN	
		FRENCH	
		ITALIAN	
		PORTUGUESE	
		DUTCH	
		CHINESE	
SUBTITLE LANG	ENGLISH	Same languages as for “AUDIO LANG”	See “AUDIO LANG”.
MENU LANG	ENGLISH	Same languages as for “AUDIO LANG”	See “AUDIO LANG”.

6.2.3 Audio setup page

Setting	Current setting (example only)	Setting options	Comments
AUDIO OUT	SPDIF / PCM	SPDIF / OFF	The optical output is turned off.
		SPDIF / RAW	The digital optical output is the same as the disc content (PCM, DTS, etc.).
		SPDIF / PCM	When selected, all audio content that is compatible with the PLN-DVDT is converted into a 44.1 kHz 16 bit PCM-signal. This ensures maximum compatibility.

6.2.4 Video setup page

Setting	Current setting (example only)	Setting options	Comments
BRIGHTNESS	Mid	0 through 12	Press the Enter key to access the brightness settings. Use the left and right navigation keys to set the brightness, and then press the Enter key to confirm the setting.
CONTRAST	Mid	0 through 12	Press the Enter key to access the contrast settings. Use the left and right navigation keys to set the contrast, and then press the Enter key to confirm the setting.
HUE	Mid	-6 through 6	Press the Enter key to access the hue settings. Use the left and right navigation keys to set the hue, and then press the Enter key to confirm the setting.
SATURATION	Mid	0 through 12	Press the Enter key to access the saturation settings. Use the left and right navigation keys to set the saturation, and then press the Enter key to confirm the setting.
SHARPNESS	Mid	0 through 8	Press the Enter key to access the sharpness settings. Use the left and right navigation keys to set the sharpness, and then press the Enter key to confirm the setting.

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7 Technical data

7.1 Electrical

Mains voltage	230/115 Vac, ±10%, 50/60 Hz
Max mains power consumption	25 VA

7.2 Performance

Frequency response	50 Hz - 20 kHz (+1/-3 dB @ -10 dB ref. rated output)
Distortion	<1% @ rated output, 1 kHz

7.3 Tuner

Tuning range

FM	87.5 - 108 MHz (EUROPE, 50 kHz)
	87.5 - 108 MHz (ASIA/AMERICA, 100 kHz)
AM	531 - 1602 kHz (EUROPE, 9 kHz)
	530 - 1610 kHz (ASIA/AMERICA, 10 kHz)

Sensitivity

FM	2 µV (26 dB S/N)
AM	30 µV (20 dB S/N)

Performance

Frequency response	30 Hz - 15 kHz (+1/-3 dB, FM)
Distortion	<1%
S/N	> 63 dB (1 mV, FM)

7.4 DVD player

Audio CD

Frequency response	20 Hz - 20 kHz (+1/-3 dB)
Distortion	<0.1%
S/N	>80 dB

MP3 CD/CD-R

Supported bit rates	CBR 32 kbps - 320 kbps and VBR, mono and stereo

General

Data buffer (shock protection)	8 MByte
Lifetime	>10.000 CD play cycles
Memory for track selection	999 tracks (MP3), 99 tracks (audio CD)

7.5 Outputs

Outputs (cinch stereo, switchable to mono)

Nominal level	1V with level control
Impedance	1kOhm

7.6 Environmental conditions

Operating temperature range	+5 to +45 °C
Storage temperature range	-25 to +55 °C
Relative humidity	<95%

7.7 General

EMC emission	acc. to EN 55103-1
EMC immunity	acc. to EN 55103-2
Safety	acc. to EN 60065
Dimensions	88 x 430 x 320 mm (19” wide, 2U high)
Weight	approx. 6 kg

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